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Old Buildings, Progressive Forms: Exploring Radical Methods of Historic Preservation

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OLD BUILDINGS, PROGRESSIVE FORMS

Exploring Radical Methods of Historic Preservation

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THESIS STATEMENT

Old buildings when coupled with -- or challenged by -- contemporary form produce new visual and spatial compositions, fundamental in developing more investigative methods of preservation that enrich architectural identity.

Since the 1960s and the formation of the National Register of Historical Places, American ideas regarding antiquity have been idly manifested in historic preservation, where old buildings are forcefully cemented in their original state to reflect their 'peak' condition. It is important to understand and visualize historic buildings as they were conceived; however, universal concessions to historical preservation fail to stimulate architectural progression.

Preserving historic buildings means supporting and enriching their contribution to the present. By directly editing old constructs with new forms, architects are better able to analyze, understand, and manipulate revered building typologies, styles, formal pretext, program, and construction techniques of the past. The purpose of this work is trifold: to understand and uncover a building's most fundamental qualities and purpose of existence, to critique historical buildings in a more active and investigative manner, and to calculate a more valuable, adaptive historical preservation that can either enhance building qualities, or reshape them.

BACKGROUND

The nineteen-sixties and seventies represent a formidable period in reframing the scope of architecture. Expressed in The Death and Life of Great American Cities (1961), Complexity and Contradiction in Architecture (1966), and Learning from Las Vegas (1972), Jane Jacobs, Robert Venturi, and Denise Scott Brown assert the architect as a social critic, chiefly one of the built environment and its relationship to predecessors. Their respective work advocated for a re-evaluation of information that had been overlooked in modernism as a consequence of zeitgeist. In what became postmodernism, authenticity in new buildings was then characterized by the rational infusion of ideas and physical forms learned by critiquing the past.[1,2,3]

Jacobs, Venturi, and Brown's reverence for the past provides groundwork for the idea of critiquing historical constructions through contemporary work. Although very critical, the larger, unintended effect of their work adjacent to the long-practiced European methods of preservation created a divide between the old and the new. As exemplified in the Venice Charter, the goal of preservation is to retain total authenticity of form.[4] Today, antiquity is idly manifested in historic preservation where old buildings are forcefully cemented in their original state to reflect their 'peak' condition. However, restoring a building to its natural state falsifies history and presents an inaccurate representation of progression that turns an operational building into relic which then loses most of its function. Most importantly it doesn't allow for architectural progression.

Whereas Jacobs, Venturi, and Brown perceive successful development as new architecture that references the past, *Old Buildings, Adaptive Forms* develops the past by implementing the new.

It is important to note that many buildings throughout history, some that society and architects alike cherish as relics, are not bound to a particular time period; many of these buildings have been modified over several centuries before reaching their "final" state as we know them today. The Florence Cathedral began construction in 1296 in a gothic style designed by Arnolfo di Cambio, and structurally finished in 1436 with a catenary-arched dome designed by Filippo Brunelleschi. Typically, catenary arches are foreign to gothic-style architecture, as Filippo Brunelleschi was the first to invent such an idea to finish work on 'the Duomo'. In 1506, Baccio D'Agnolo was commissioned to design the decorative drum of the dome, which mimics classical Roman styles of architecture. Despite being juxtaposed onto the catenary-arched cupola, the decorative drum is conceived of only Roman arches. In a span of over 300 years, three phases of design within three different time periods resulted in three different approaches and styles composed into a single building.

1. Jacobs, Jane. The Death and Life of Great American Cities. Vintage Digital, 1961.
2. Venturi, Robert. Complexity and Contradiction in Architecture. Butterworth Architecture, 1966.
3. Venturi, Robert, et al. Learning from Las Vegas. The MIT Press, 1972.
4. Kolson Hurley, Amanda. "How to Reinvent Historic Preservation." Architect (January 2017).

The Florence Cathedral therefore cannot be defined by a single period, as its design was consistently built upon and reimagined. Architectural historian Dewi Cut describes, "All buildings, especially those from the very distant past, have been repaired in subsequent eras following initial construction. For example, cities from ancient times and their buildings like the Parthenon have undergone some changes long before being designated as historical heritage, so if we want to conserve the Parthenon to what era's version should we repair it to? Which style of authenticity should we follow?" [5] Describing authenticity as it relates to architectural history is complex. If authenticity is defined and marked by original conditions, then what is the original condition of a building such as the Florence Cathedral? Studies by historians such as Dewi are significant to setting the stage for contemporary intervention and later efforts of architectural transformation and blurred lines between time periods.

What followed World War II was a nuanced approach to reinterpreting the buildings affected by disaster -- specifically buildings that symbolized national identity. In 1956 Italy, work commenced on two fourteenth century buildings destroyed during the war; BBPR's (an architecture studio formed by architects Gianluigi Banfi, Lodovico Barbiano di Belgiojoso, Enrico Peressutti, and Ernesto Nathan Rogers) reinterpretation of Castello Sforzesco, a fortress in Milan, and Carlo Scarpa's reinterpretation of Castelvecchio, a castle turned museum in Verona. In both instances, the problem was not trying to imitate original building materials or styles, but rather display the contents and functions of the buildings through excavation and addition. Architect Richard Murphy explains, "Scarpa was primarily interested not in any [orthodox] concepts of restoration but in an idea to do with historical clarity, making history visible by the co-existence of overlaying fragments of construction." [6]

According to Scarpa, it was important to demonstrate an architectural progression of time, where materials and styles weren't directly recreated but rather imitated and extrapolated to further uncover the composition of the original building. With Castello Sforzesco, instead of meticulously rehabilitating and reconstruction the original construct, adding new forms allowed BBPR to abstract upon the existing and delineate the building. Their work effectively allows one to see the composition of Castello Sforzesco and how Francesco Sforza, the original architect of the castle, conceived of the facade and thus provides a deeper historical meaning and understanding of tectonic forms that architects can draw influence from in contemporary projects.

5. Dewi, Cut. "Rethinking architectural heritage conservation in post-disaster context." International Journal of Heritage Studies 6 (February 2017): 587-600.
6. Brownel, Blaine. "Improving New Ideas by Building on Old Concepts." Architect (November 2016).
7. Vinegar, Aaron. "Viollet-le-Duc and Restoration in the Future Anterior." Future Anterior: Journal of Historic Preservation, History, Theory, and Criticism 3, no. 2 (2016): 54-65.

I. PRECEDENT STUDIES CATALOG OF INTERVENTIONS

This project begins by analyzing architectural projects that utilize contemporary forms to modify older constructs. Precedent studies into recent, and largely underexplored, mediums of synthesizing new and old form provides groundwork in examining the causes and effects of such impositions, effectively creating a catalog of interventions useful in refining and implementing meaningful design. The follow catalog is based on the conceptual and formal approach taken by the designer. In each precedent listed and explored, program is either secondary or entirely obsolete following form.

Catalog of Interventions

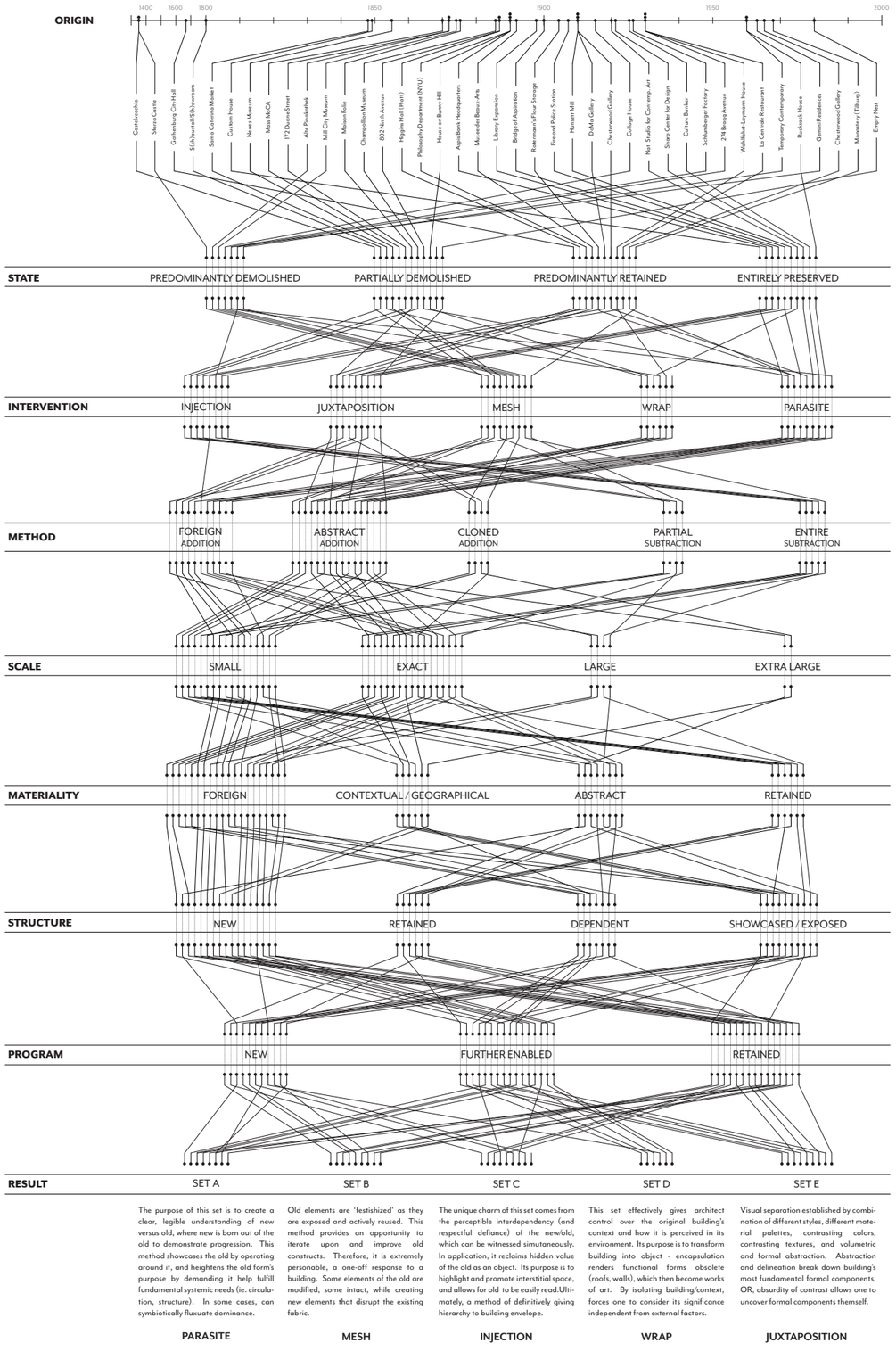
An *injection* is simply a new form inserted into an old volume that has its own identity and creates its own world. It nestles into the existing structure and is respectfully defiant yet unimposing toward what was there before it. The charm of injections come from the perceptible interdependence of the old and new, which can be witnessed at the same time. The application of insertions reclaims hidden value of the old building and presents it as an object, while highlighting and promoting interstitial space. Its purpose allows for the old form to be easily read and understood, and is a method of definitively giving hierarchy to the historical significance of the old form.

A *juxtaposition* is a type of intervention where the new form does not engage in an obvious dialogue with the old building, but highlights the original through a complex and rigid composition by exposing discrepancies between the two. The original building remains fully legible and there are no blurred boundaries. Its application is a visual separation established by a combination of contrasting architectural styles, material palettes, colors, textures, and volumetric and spatial abstraction. Its purpose is to provide an abstraction, delineation, or precise breakdown of the original building's most fundamental components.

A *mesh* is a new, complex, interwoven form that defies the building fabric of the old form, where the seams between new and old are not immediately apparent. The image of the original building is modified and muddied, and the new becomes inseparable from the old. In its application, some of the historical elements are modified, and some intact. The purpose of a mesh is to 'fetishize' old elements as they are exposed and actively reused. This method provides an opportunity to iterate upon and improve old constructs as a means of adding to the historical significance. Therefore, it creates an extremely personable and one-off response to a building.

A *parasite* is a new form that benefits at the expense of the old (or host), and depends upon the original structure to exist. The original building therefore provides life to the new through structural support, occupant access, and infrastructure. In its application, the new form is generated by the original building. Its purpose is that it creates a clear, legible understanding of the new and the old, where the new is born out of the old to demonstrate progression and iteration. The new form effectively showcases the original building by operating around it and taking advantage of its most basic features and functions that may have been overlooked otherwise. The parasite heightens the original building's purpose by demanding it help fulfill the needs of the parasite.

A *wrap* is a new form that encapsulates the former and provides intermittent views of the original building. Because the new form encapsulates the old, it renders functional forms, such as roofs and walls, obsolete which then become works of art. Wraps literally, and satirically, preserve a building. Its application is simply a new form wrapped around an old form, with a varying degree of exposure to the old form. The purpose of a wrap is to transform a building into an object and treat the original building as a trivial element that can be easily studied. Wraps isolate the original building from context and forces one to consider its significance, independent from external factors. The architect is then given complete control over the context and can manipulate the surroundings to better cater to the original building's needs to reflect its intended purpose.



The purpose of this set is to create a clear, legible understanding of new versus old, where new is born out of the old to demonstrate progression. This method showcases the old by operating around it, and heightens the old form's purpose by demanding it help fulfill fundamental systemic needs (ie. circulation, structure). In some cases, can symbiotically fluxuate dominance.

PARASITE

Old elements are 'festishized' as they are exposed and actively reused. This method provides an opportunity to iterate upon and improve old constructs. Therefore, it is extremely personable, a one-off response to a building. Some elements of the old are modified, some intact, while creating new elements that disrupt the existing fabric.

MESH

The unique charm of this set comes from the perceptible interdependency (and respectful defiance) of the new/old, which can be witnessed simutaneously. In application, it reclaims hidden value of the old as an object. Its purpose is to highlight and promote interstitial space, and allows for old to be easily read.Ultimately, a method of definitively giving hierarchy to building envelope.

INJECTION

This set effectively gives architect control over the original building's context and how it is perceived in its environment. Its purpose is to transform building into object - encapsulation renders functional forms obsolete (roofs, walls), which then become works of art. By isolating building/context, forces one to consider its significance independent from external factors.

WRAP

Visual separation established by combination of different styles, different material palettes, contrasting colors, contrasting textures, and volumetric and formal abstraction. Abstraction and delineation break down building's most fundamental formal components, OR, absurdity of contrast allows one to uncover formal components themself.

JUXTAPOSITION

Intervention Analysis

Diagram A lists the five types of interventions this project has uncovered through characterizing the formal precedents that reflect contemporary forms challenging old buildings to produce new methods of investigating historical constructs.

Each intervention has an individual application, application impact, and approach to an existing building that provides groundwork for uncovering a building's most fundamental qualities and purpose of existence, as well as a medium for investigative critiques. *Diagram B* uses the same set of precedents to more vigorously explore how contemporary interventions contribute to a greater understanding of a historical building. Through exploration in this category, this project is able to identify successful themes and and meticulously determine which intervention will be most successful in achieving a specific desired outcome.

Likewise, Diagram B was used to pinpoint precedents that were unsuccessful according to their intervention, which will be noted as projects that should have utilized alternative solutions.

Intervention Typology
Injection

a new form inserted into an old volume;
assumes and modifies the existing internal shape

Impact of Application

A creates interstial space
B priveledges the original building's facade

Approach to Existing

A exterior largely unaltered
B interdependence between new and old


DoMa Gallery
Sch(h)austall/Schowroom
Champollion Museum

Intervention Typology
Juxtaposition

a new form that attaches to an old volume;
no blured boundaries between new and existing

Impact of Application

A visual separation between style, material
B does not engage in an obvious dialog

Approach to Existing

A original remains fully legible
B not concerned with direct correlation


Hunnett Mill
Gothenburg City Hall
Maison Folie

Intervention Typology
Wrap

a new form that encapsulates an old form;
controls exposure to the existing building

Impact of Application

A provides intermitten views of the old
B literally 'preserves' the building

Approach to Existing

A original largely left untouched


Le Fresnoy Studio
House on Bunny Lane
Santa Caterina Market

Intervention Typology
Mesh

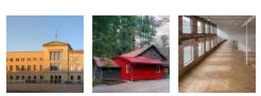
a new form that interweaves into old form;
defies existing building fabric

Impact of Application

A original modified and muddied
B seams between old and new not apparent

Approach to Existing

A strives to directly 'edit' the original
B interdependence between new and old


Neues Museum
Chesterwood Gallery
Mass MoCA, Building 6

Intervention Typology
Parasite

a new form that feeds off of the old form;
generated by the existing

Impact of Application

A new form becomes is its own 'building'
B visual manipulation between old and new

Approach to Existing

A takes over significant existing bldg systems
B strives to modify purpose of existing

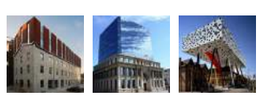

Rotermann's Flour Storage
CSAV Headquarters
Sharp Center for Design

Diagram A left, *Diagram B* right

I. PRECEDENT STUDIES ANALYSIS OF SIGNIFICANT BUILDINGS

INJECTIONS

172 Duane Street
New York, New York (1991)
Vincenzo Polsinelli

274 Bragg Avenue
Auburn, Alabama (2009)
David Hill

Champollion Museum
Figeac, France (2007)
Moatti & Riviée Architects

DoMa Gallery
Baltimore County, Maryland (2004)
W Architecture

La Centrale Restaurant
Beirut, Lebanon (2000)
Bernard Khoury

Philosophy Department, NYU
New York, New York (2007)
Steven Holl

S(ch)austall/S(h)owroom
Rheinland-Pfalz, Germany (2004)
FNP Architekten

Uffizi
Florence, Italy (1559)
Giorgio Vasari

JUXTAPOSITIONS

Aspis Bank Headquarters
Athens, Greece (2008)
Dimitris Paapaioannou + Associates

Higgins Hall, Pratt Institute
Brooklyn, New York (2005)
Steven Holl

Hunsett Mill
Stalham, England (2010)
Acme

Empty Nest
Newton, Massachusetts (2002)
Della Valle + Bernheimer

Gothenburg City Hall
Gothenburg, Sweden (1936)
Erik Gunnar

Library Expansion
Nembro, Italy (2007)
Archea Associati

Maison Folie
Mons, Belgium (2005)
Atelier d'Architecture Matador

Musée des Beaux-Arts
Lille, France (1997)
Ibos & Vitart Architects

Bridge of Aspiration
London, Endland (2003)
Wilkinson Eyre Architects

MESHES

Alte Pinakothek
Munich, Germany (1957)
Ernst Buckner

Castello Sforzesco
Milan, Italy (1956)
BBPR

Castelvecchio
Verona, Italy (1956)
Carlo Scarpa

Collage House
London, England (2004)
Jonathan Tuckey

Mass MoCA
North Adams, Massachusetts (1999)
Bruner Cott Architects

Mill City Museum
Minneapolis, Minnesota (2003)
Meyer, Scherer and Rockcastle

Monastery for the Brothers of Tilburg
Vught, Netherlands (2000)
Marx and Steketee Architects

Neues Museum
Berlin, Germany (2009)
David Chipperfield & Julian Harrap

Temporary Contemporary
Los Angeles, California (1983)
Frank Gehry

WRAPS

House on Bunny Lane
Bernardsville, New Jersey (2001)
Adam Kalkin

Le Fresnoy National Studio for Contemporary Art
Le Fresnoy, France (1997)
Bernard Tschumi Architects

Palazzo della Ragione
Vicenza, Italy (1546)
Andrea Palladio

Santa Caterina Market
Barcelona, Spain (2005)
Enric Miralles & Benedetta Tagliabue

Schlumberger Factory
Montrouge, France (1985)
Renzo Piano & Ove Arup and Partners

Wohlfhart-Laymann House
Frankfurt, Germany (2006)
Meixner, Schlüter, Wendt Architects

PARASITES

802 Ninth Avenue
New York, New York (2009)
Cleanroom Inc. & Aston Associates

Chesterwood Gallery and Visitor Center
Stockbridge, Massachusetts (1998)
Françoise Bollack Architects

Culture Bunker
Frankfurt, Germany (2005)
Index Architekten

Custom House
Boston, Massachusetts (1915)
Peabody & Stearns

Fire and Police Station
Berlin, Germany (2004)
Sauerbruch Hutton Architects

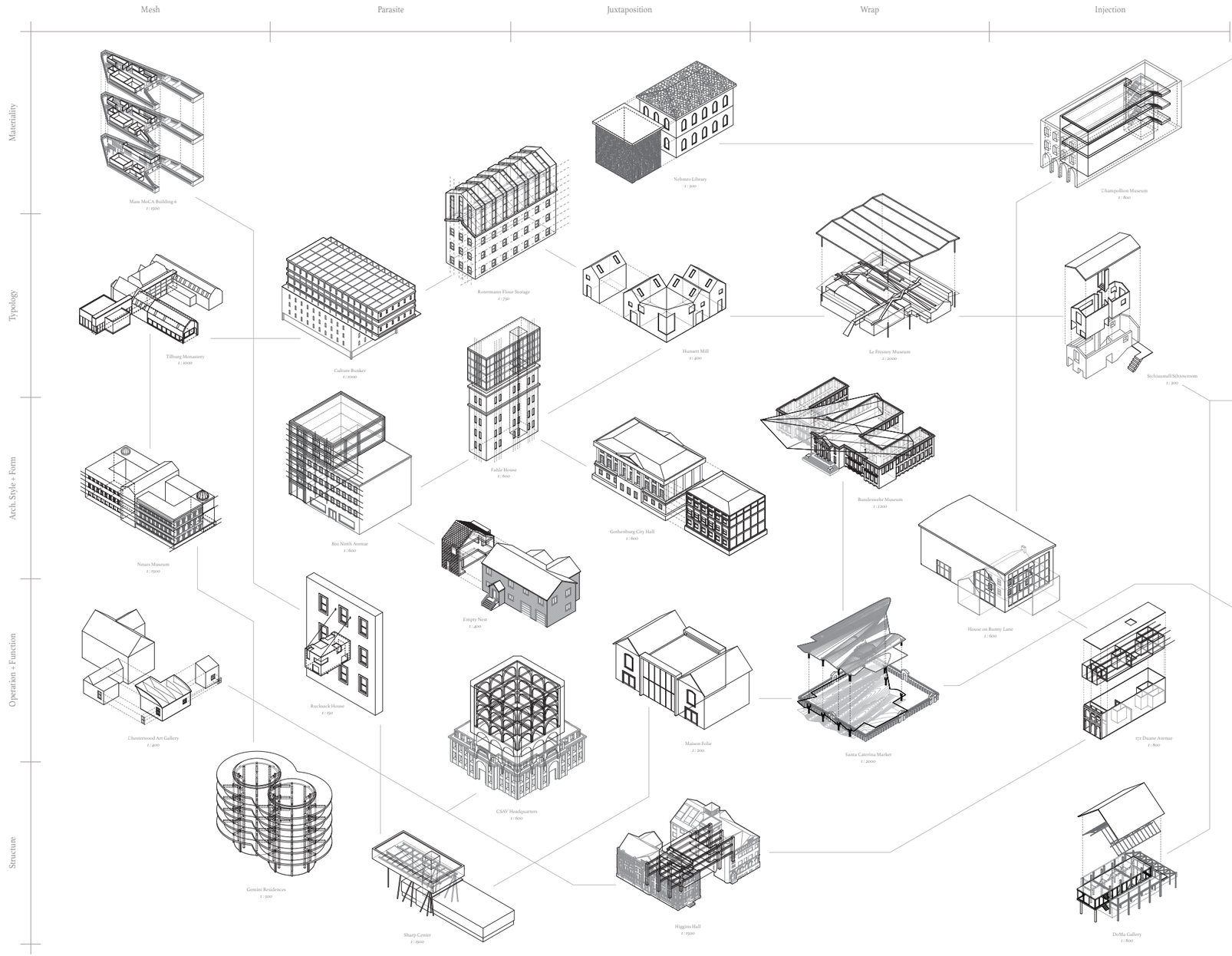
Gemini Residences
Islands Brygge, Denmark (2005)
MVRDV & JJW Arkitekter

Rotermann's Flour Storage
Tallinn, Estonia (2009)
HG Arhitektuur

Rucksack House
Köln/Essen/Bamberg, Germany (2004/06/11)
Stefan Eberstadt & Urban Drift Productions

Sharp Center for Design
Toronto, Canad (2004)
Alsop Architects & Robbie, Young + Wright

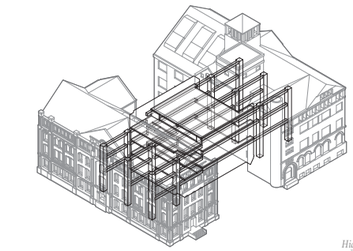
Intervention Analysis



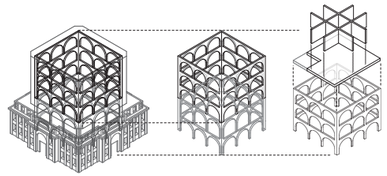
Intervention Attitudes / Beaux Arts Interventions

Conservation

Interventions with an attitude toward conservation reflect similar ideals as that of typical efforts in historical preservation. This method is weary of intervening too heavily within a building and uses minimal techniques to highlight what already exists. There is very little reinterpretation of the existing, however these interventions often reclaim the hidden value of significant architecture systems that would otherwise have gone unnoticed without intervention. Common culprits of conservations are wraps, injections, and sometimes meshes.



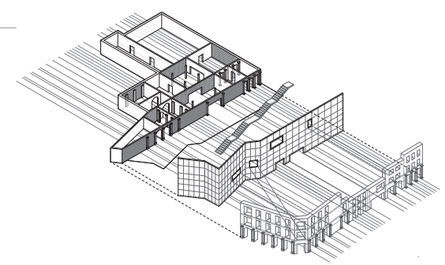
Higgins Hall



CSAV Headquarters

Development

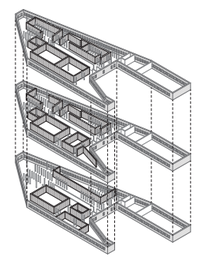
Interventions with an attitude toward development recognize the important building characteristics and architectural systems of the existing, and extrapolate upon them so as to inhance their characteristics and fetishize their importance in relation to the original building. This method provides an opportunity to iterate upon and improve old constructs. Therefore, an extremely personable, one-off response. Some elements of the old are modified while creating new elements that disrupt the existing fabric. Common culprits of developments are meshes, parasites, and juxtapositions.



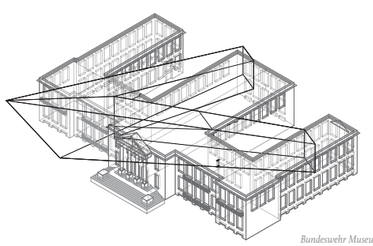
Fine Arts Museum of Asturias

Superimposition

Interventions with an attitude toward superimposition recognize the important building characteristics and architectural systems of the existing, and turn them on their head. This caregory of buildings reject all approaches toward historical preservation so as to alter its perception or definitively usher the building into the twenty-first century. Although superimpositions may be a 'disrespectful' approach to any form of historical preservation, a case can be made that calculative opposition to building characteristics is another form of juxtaposition, or a deliberate attempt to showcase the original through stark contrast. Common culprits of superimpositions are parasites, juxtapositions, and injections.



Mass MoCA Building 6



Bundeswehr Museum

DoMa GALLERY - INJECTION

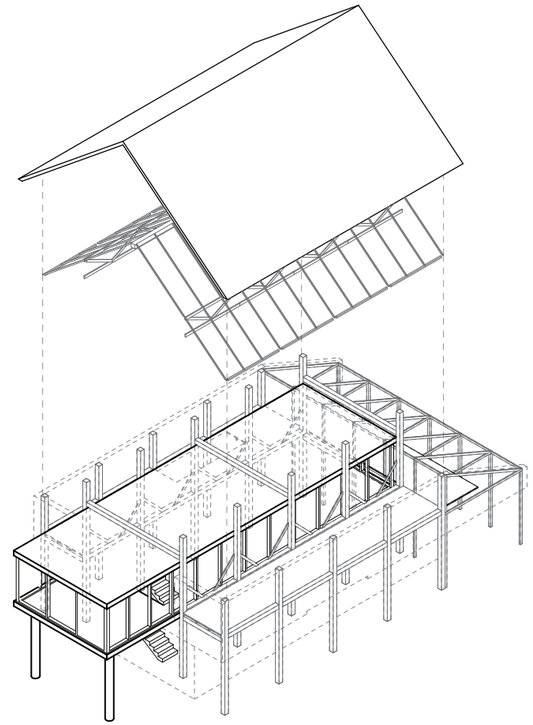
Fig. 1: Barn Renovation (3) by Erik Kvalsvik, Baltimore County, 2002
Fig. 2: Barn Renovation (4) by Erik Kvalsvik, Baltimore County, 2002
Fig. 3: Barn Renovation (7) by Erik Kvalsvik, Baltimore County, 2002
Fig. 4: DOMA Gallery by Alan Karchmer, Baltimore County, 2009

Unknown / 2004 | Baltimore County, Maryland | W Architecture

Unknown when the building was first conceived, the DOMA Gallery was once simply a barn in the middle of a sheep field, and exists as an exemplary typology of an eastern United States barn.

In 2004 the barn was reimagined as an ironic gallery to primarily showcase the building itself. Rather than preserving the barn to its original state, the new additions dissect the barn and allow the occupant to better explore and understand its physical significance.[1] The glass cube is meant to be an "invisible" structure, offset a few feet from the interior walls of the barn to create an interstitial space that showcases the existing building without heavy interference. As the barn continues to age, the occupant is witness to its change, as the connection between the new and old reflects the march of time.

The glass cube extrudes out of the exploded east barn facade so as to redefine threshold, exploit the barn's texture and color as a simple, singular layer, and beautify the weathered shell in contrast to the orderly new structure.



1. "The DoMa Gallery." W Architecture Portfolio, W Architecture, 5 Oct. 2016.

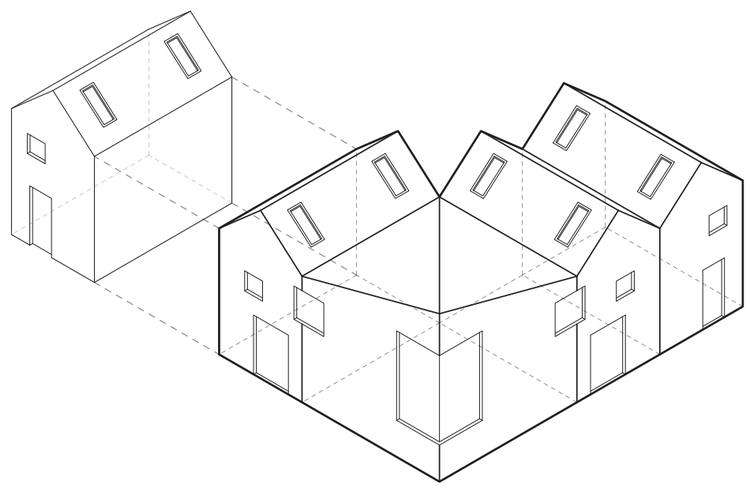
HUNSETT MILL - JUXTAPOSITION

Fig. 1: Barn Renovation (3) by Marc Kristal, Stalham, 2002
Fig. 2: Hunsett Mill (6) by Marc Kristal, Stalham, 2015
Fig. 3: Hunsett Mill (8) by Marc Kristal, Stalham, 2015
Fig. 4: Hunsett Mill (5) by Marc Kristal, Stalham, 2015

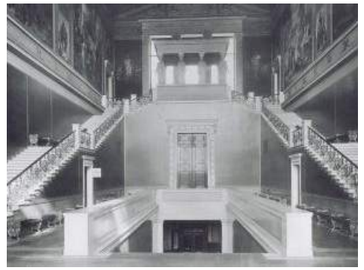
1910 / 2010 | Stalham, England | Acme

Acme deploys juxtaposed 'copy and paste' forms that mimic that of the original construct to sentimize the past and fetishize the original structure. The orientation and positioning of the additions render different stages of the shadow cast by the brick structure. When approaching the building, the juxtaposed forms are completely perspectibally hidden - one must explore the building to full understand its potential. The project strips away all superfluous building elements on both the interior and exterior to recreate forms that showcase the original by stark contrast. Materiality, orientation, configuration, slight alterations in roof pitch, and increasingly large form serve to iterate upon the original building and provide alternative solutions to a similar scheme without disrupting the original building itself - one is able to understand the existing as its own entity.

The new form does not distract from old because 'blankness' (from materiality, form, scale) ground all portions of the building to a similar hierarchy.[1]



1. The Norfolk Windmill Trust, Windmills to Visit Guide. 3rd Edition, The Morris Printing Co. 1982.



NEUES MUSEUM - MESH

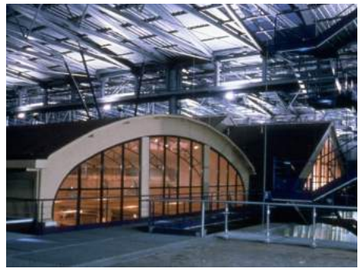
Fig. 1: Untitled by Wolfgang Bittner, Berlin, date unknown (cerca 1920)
Fig. 2: The Neues Museum by David Chipperfield Architects, Berlin, 2009
Fig. 3: Neues Museum by Getty Images, Berlin, 2011
Fig. 4: Exterior of the Neues Museum in Berlin by Mark U., Berlin, 2009

1855 / 2009 | Berlin, Germany | David Chipperfield Architects in collaboration with Hulian Harrap

Built by King Wilhelm IV as a 'sanctuary for art,' the museum took heavy damage during WWII and the *Bombing of Berlin*.[1]

Rather than recreate the building exactly as it was, Chipperfield uses methods of formal meshing to tie the old and new together in a noticeable but also respectful manner. Decaying columns and wall treatments are left unfinished to express the march of time, how buildings naturally age. Chipperfield explains, "Our vision was not to make a memorial to destruction, nor to create a historical reproduction, but to ... make sense of the extraordinary ruin and remains that survived..." [2] The decision to repair, complete, or add is grounded by the individual element's historical meaning -- the greater the significance toward defining the original state of the building, the more the element is iterated upon, extrapolated, and abstracted. The building is a great example of failing to privilege a specific period of time in architecture. The combination of new and old forms allow a better interpretation of which elements are essential to the building's historic composition, effectively establishing a guide to interpreting hierarchy of a building in this style and of its period.

1. Richter, Christoph. "Reconstruction of Berlin's Neues Museum vexes traditionalists". Deutsche Welle, 2009.
2. Rattenbury, Kester. "The Neues Museum." *The Architects' Journal*, EMAP Publishing Limited, 2010.



LE FRESNOY NATIONAL STUDIO FOR CONTEMPORARY ART - WRAP

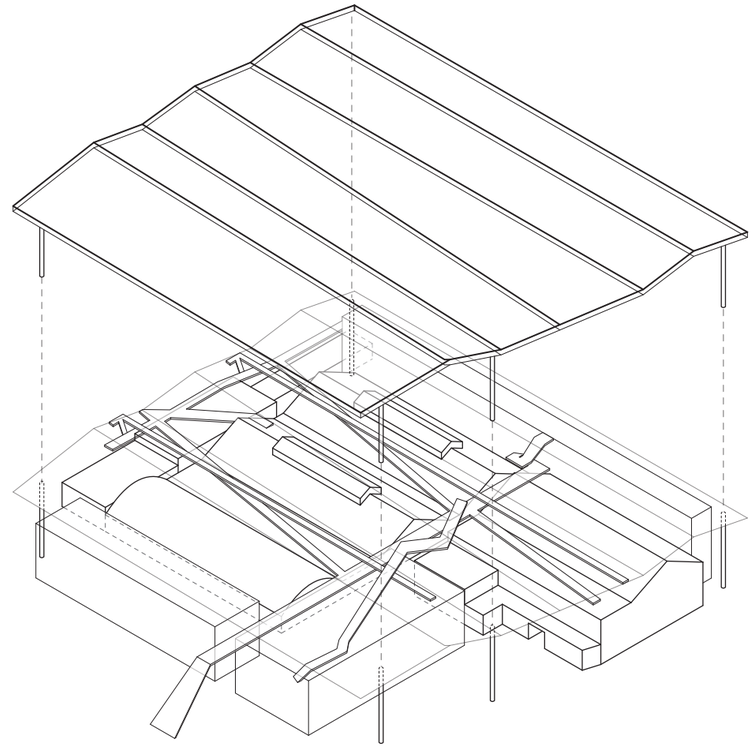
Fig. 1: Le Fresnoy by Petr Šmídek, Le Fresnoy, 2009
Fig. 2: Le Fresnoy Art Center by Jonathan Rieke, Le Fresnoy, 2010
Fig. 3: The National Studio for Contemporary Arts by Bernard Tschumi Architects, Le Fresnoy, 1999
Fig. 4: 22 Rue du Fresnoy by Google Maps, Le Fresnoy, 2017

1920s / 1997 | Le Fresnoy, France | Bernard Tschumi Architects

Among a series of 1920s buildings, Tschumi's intervention literally preserves the originals aginst natural elements with a large pavillion. The wrap effectively treats the original buildings as a collection of objects that can be explored and exposed through a complex, egotistical, city-like system of circulation.

Paths, stairways, and balconies weave between and around the the buildings to provide new modes of interaction that expose building methods and details, such as that of the roofs, that one would not be able to see otherwise.[1]

In this instance, wrapping allows the architect to isolate the buildings from their context to reimagine and recreate a context free from geographical surroundings in order to appreciate the series of buildings as a collection of architectural relationships concerned with nothing but one another. Openings in the wraps provide significant perspectival views of the original building while hiding others. Had Tschumi not unified the buildings through wrap, the constructs would have fallen subject to average edifices among the streetscape.



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ROTERMANN'S OLD AND NEW FLOUR STORAGE - PARASITE

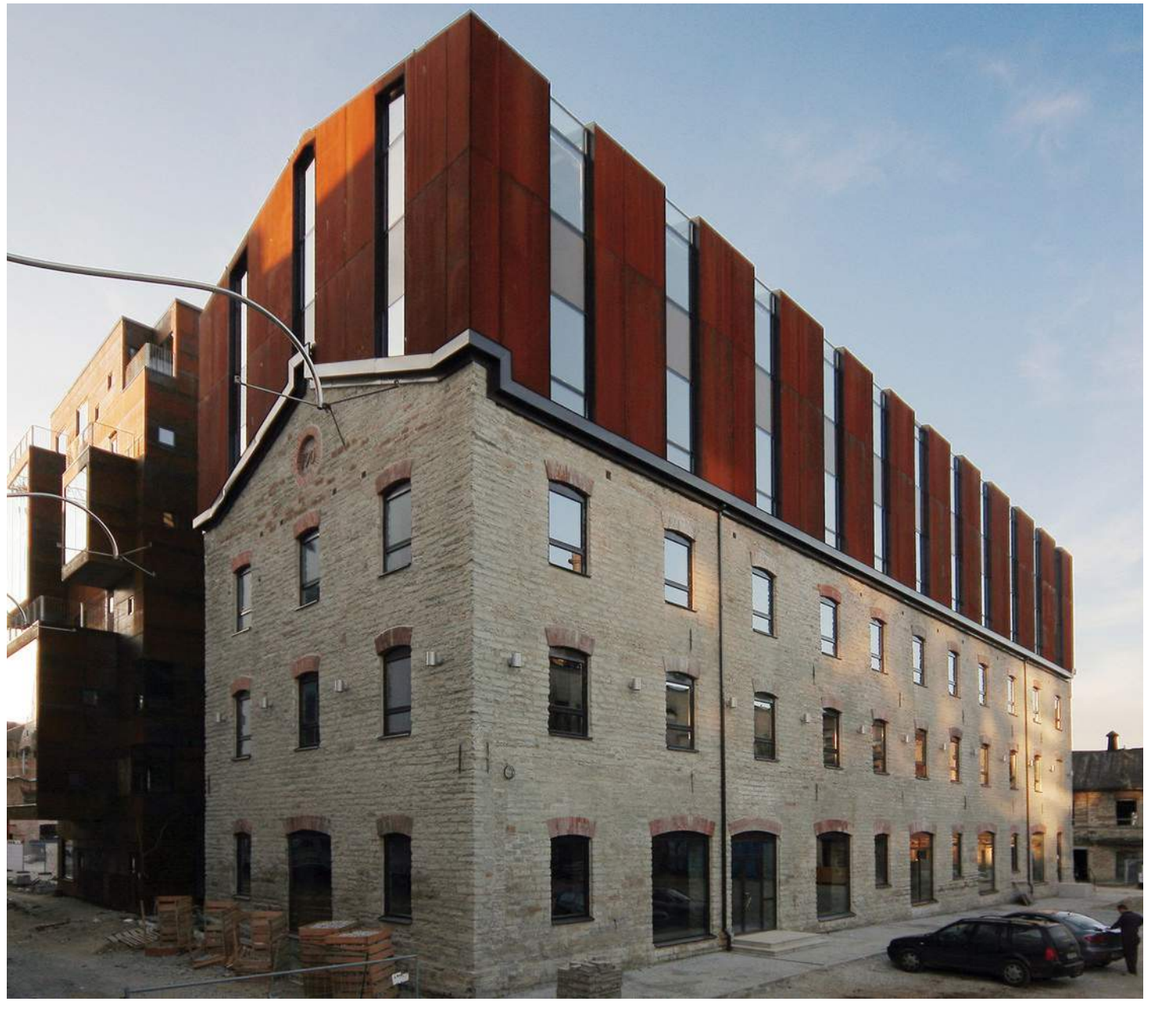


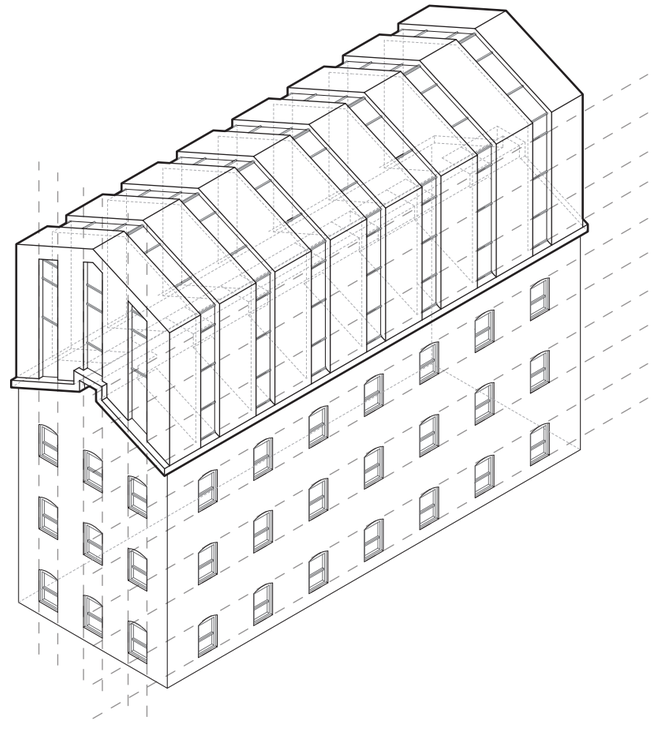
Fig. 1: Recapping Tallinn Architecture (12) by Reio Avaste, Tallinn, 2014.
Fig. 2: Recapping Tallinn Architecture (18) by Reio Avaste, Tallinn, 2014.
Fig. 3: Unnamed by Sven Soome, Tallinn, 2013.
Fig. 4: Rotermanni Vana Jahuladu Ja Uus Jahuladu by Martin Siplane, Tallinn, 2012.

1904 / 2009 | Tallinn, Estonia | Hayashi-Grossschmidt Arhitektuur

HG Arhitektuur's interventions in the Rotermanni is an abstraction and careful delineation of the building's most fundamental formal components. While maintaining color, texture, and some materiality, the new form strips away ornament to assess how architects conceived of the typology's facade. Local wood and stone was used to reflect surrounding buildings and pay tribute to the community and context in which the building resides, arguably a multifaceted respectful building treatment.[1]

In a calculated expansion, HG Arhitektuur mained the original building's formal character by extrapolating fenestration and form, maintaining their respective proportions and orientation. The concept was to strengthen the historical character of the original building by juxtaposing and reinforcing form, almost 'doubling' the building on top of itself.

Program as a secondary characteristic, the parasitic form heighten's the building's ability to continue function as a modern office and storage space. With preservation in mind, it was important to HGA to not alter the building's intented purpose.[1]



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II. THESIS PROJECT DESCRIPTION

Old buildings when coupled with -- or challenged by -- contemporary form produce new visual and spatial compositions, fundamental in developing more investigative methods of preservation that enrich architectural identity.

Preserving historic buildings means supporting and enriching their contribution to the present. By directly editing old constructs with new forms, architects are better able to analyze, understand, and manipulate revered building typologies, styles, formal pretext, program, and construction techniques of the past. The purpose of this work is trifold: to understand and uncover a building's most fundamental qualities and purpose of existence, to critique historical buildings in a more active and investigative manner, and to calculate a more valuable, adaptive historical preservation that can either enhance building qualities, or reshape them.

The global rise of modernism in the late nineteenth and early twentieth centuries ushered in an attraction to zeitgeist, where the spirit of the age became an overwhelming tendency for designers of all professions to produce the most contemporary work, effectively creating a disparity between architecture during and after modernism the "contemporary," and architecture before modernism, the "historic." In response, the nineteen-sixties and seventies represent a formidable period in reframing the scope of architecture. Expressed in The Death and Life of Great American Cities (1961), Complexity and Contradiction in Architecture (1966), and Learning from Las Vegas (1972), Jane Jacobs, Robert Venturi, and Denise Scott Brown assert the architect as a social critic, chiefly one of the built environment and its relationship to predecessors.[1,2,3] Their respective work advocated for a re-evaluation of information that had been overlooked in modernism as a consequence of zeitgeist. In what became postmodernism, authenticity in new buildings was then characterized by the rational infusion of ideas and physical forms learned by critiquing the past.

Current methods of preservation have created a divide between the old and the new. Antiquity is idly manifested in historic preservation where old buildings are forcefully cemented in their original state to reflect their 'peak' condition. Current approach doesn't allow for architectural progression. Rather, a more adaptable approach to buildings is the term Aaron Vinegar uses to describe the work of Viollet-le-Duc, the future anterior. The future anterior is the idea that a building is never completed nor grounded in a specific era, as it is always subject to change and new architectural interventions to maintain purpose and relevance.[4]

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2. Venturi, Robert. Complexity and Contradiction in Architecture. Butterworth Architecture, 1966.
3. Venturi, Robert, et al. Learning from Las Vegas. The MIT Press, 1972.
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OVERVIEW

Purpose

The significance of *Old Buildings, Adaptive Forms* is to both, one, discover and extrapolate upon new strategies of developing more investigative and active methods of understanding, critiquing, and modifying buildings to enrich the architectural identity of historical constructs, and two, create a manifesto that details significant methods of intervention and subsequent processes, coupled with meaningful precedents, to ignite a greater conversation surrounding the current, stagnant approach toward historical preservation.

This thesis aims to intricately outline progressive solutions -- both successful and unsuccessful -- of maintaining the historical and architectural integrity of revered buildings. The broader aspiration of this project is to culminate the ideas of those that see the value in rethinking historical preservation in order to recognize and capitalize on missed opportunities that arise when societies become too cautious about changes in the natural development of architecture. Current approaches to preservation claim to be accurate depictions of history, but rather are snapshots of architecture no more useful than photos and two-dimensional documentation. *Old Buildings, Adaptive Forms* accentuates that prioritizing architecture and the subsequent buildings we produce as being perpetually incomplete will yield a pursuit to uncover an ever-expanding discourse that is increasingly self-aware and critical of the built environment.

Overview and Schedule

The initial phase of exploration will determine what types of buildings are important to preserve and why a new method of historical preservation is necessary. F.M. Al-Nammari and M.K. Lindell's discoveries into the efforts of restoring post-disaster buildings, such as in San Francisco following the 1989 Loma Prieta earthquake, will allow me to draw connections between typologies, functions, and styles of buildings that communities rallied to have restored versus buildings that were permitted to be built brand new.[1] This information will help inform the characteristics of buildings that societies idolize, which will become the class of buildings this thesis will pursue.

Building upon Cheesman and Poole's ideas regarding the fusion of architecture periods and styles, the second phase of exploration will attempt to make a case for the future anterior: the principle that

architecture of the past, present, and future is never completed nor entirely grounded in a specific era, and that an organized juxtaposition of form and function produces more honest depictions of cultural development.[2] Evidence will be derived from first analyzing and critiquing projects that advance relationships between the built environment and the community, and secondly analyzing and critiquing precedents of the revered typologies exposed in phase one by looking at how the typologies have evolved and been improved upon over time. I will use this information to consider and iterate upon the typology through common methods of building treatments, conservation, adaption, experimental preservation, and reconstruction, and evalutate the combined success.

Alongside developing a manifesto that will largely consist of intervention analyses similar to that explore thus far, I will develop a series of building projects that culminize my thesis research and accurately cover the interventions and subsequent building system effects and results exemplified in the manifesto.

Execution and Building Choices

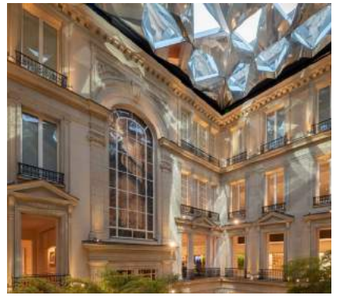
In choosing three historical buildings belonging to a number of traits outlined in the Intervention Analysis, I will intervene with meaningful contemporary form to demonstrate the extent to which a manifesto such as this is successful. Each of the buildings so far have two things in common: they were abandoned and discarded until receiving proper intervention, and were largely able to maintain the same program as had belonged in the building previously and did not have to fall back upon adaptive reuse. A variety in site selection will help prove progressive interventions in historical preservation don't have to rely solely on the monumental; it is possible and suitable at various scales, states of decay, and locations. Trivial buildings that deserve preservation may often be overlooked as commodities.

Carnegie Library in Washington DC is an ample site choice, as it has a deep cultural history and belongs to a significant building typology and style. The library is largely overlooked today, and no longer functions as one due to it not being able to accomodate the modern changes to library programs. Moreover, Apple has vowed to take over the building and implement changes that fail to acknowledge the building as one of histoical prowess.

Apple, Inc. Beaux Arts Stores

Apple, Inc. is one of the most prolific entities to intervene within Beaux Arts Buildings. Apple sees a value in situating themselves in historically significant buildings so as to further cement themselves as a company rooted in history and the infrastructures of the political, social, economical, and educational buildings they take over.

Apple has a consistent record of taking over and renovating historically significant buildings that have political, social, economical, and educational value; be that government owned libraries, banks, or buildings funded and built by the wealthiest families in the United States, and toying with what degree of superimposition interventions they can make -- and whether they actively mean to or not -- deface a history they weren't part of and recreate it. Alternatively, one could view their interventions as social conservation and manipulation through architecture -- to play with blending into fabric, and standing out. Among their six most recent Beaux Arts buildings, Apple's attitude toward intervention wavers between conservation and superimposition.



Haussmann Appartments

1865, 2018 | Paris, France

The Champs-Elysées is a famed avenue in Paris that's home to cafes, theatres, super-luxe shops. "The Apple Store on the Champs-Elysées will employ the design philosophy used with other locations that have opened recently around the world, with a greater emphasis on education and community," - Jonathan Ive

Mixed Attitude

U.S. Mortgage & Trust bank

1920, 2015 | New York, USA

This location originally housed the U.S. Mortgage & Trust bank in the 1920s. The building's architecture and previous use lends the store a vintage look that includes tall ceilings and marble features. Apple added chandeliers to reproduce originals, and refurbished a bank vault as special entrance for VIP customers.

Conservation

Antonio Salviati Studio

1898, 2016 | London, England

Regent Street is one of the most famous shopping streets in the world, and the site where Apple opened its first retail store in Europe in 2004. Stefan Behling of Foster + Partners says, "Apple Regent Street is about a respectful dialogue between old and new ... to create an experience that is warm and inviting."

Superimposition

Opéra Garnier

1850s, 2011 | Paris, France

This location resides directly next to the Opera House, or the Palais Garnier, known as the "most famous opera house in the world". Along with Notre Dame Cathedral, the Eiffel Tower, and Louvre, the Opera Garnier is one of the most significant symbols of Paris.

Conservation

Jungfernstieg

1842, 2015 | Hamburg, Germany

Jungfernstieg features direct access to some of Hamburg's largest shopping malls and accommodates a number of banks, art galleries and high-end shops. More importantly, it has a long history of bring the inner city's commercial and street life.

Superimposition

Grand Central Station

1871, 2011 | New York, USA

As an important cultural hub, around 750,000 people pass through Grand Central Terminal each day. Built by the Vanderbilts who owned a monopoly on the railway business in the mid 1800s and once the wealthiest family in America, Grand Central Station was one of the first competely electric buildings in the world.

Conservation

SITE/PROGRAM/TECTONICS

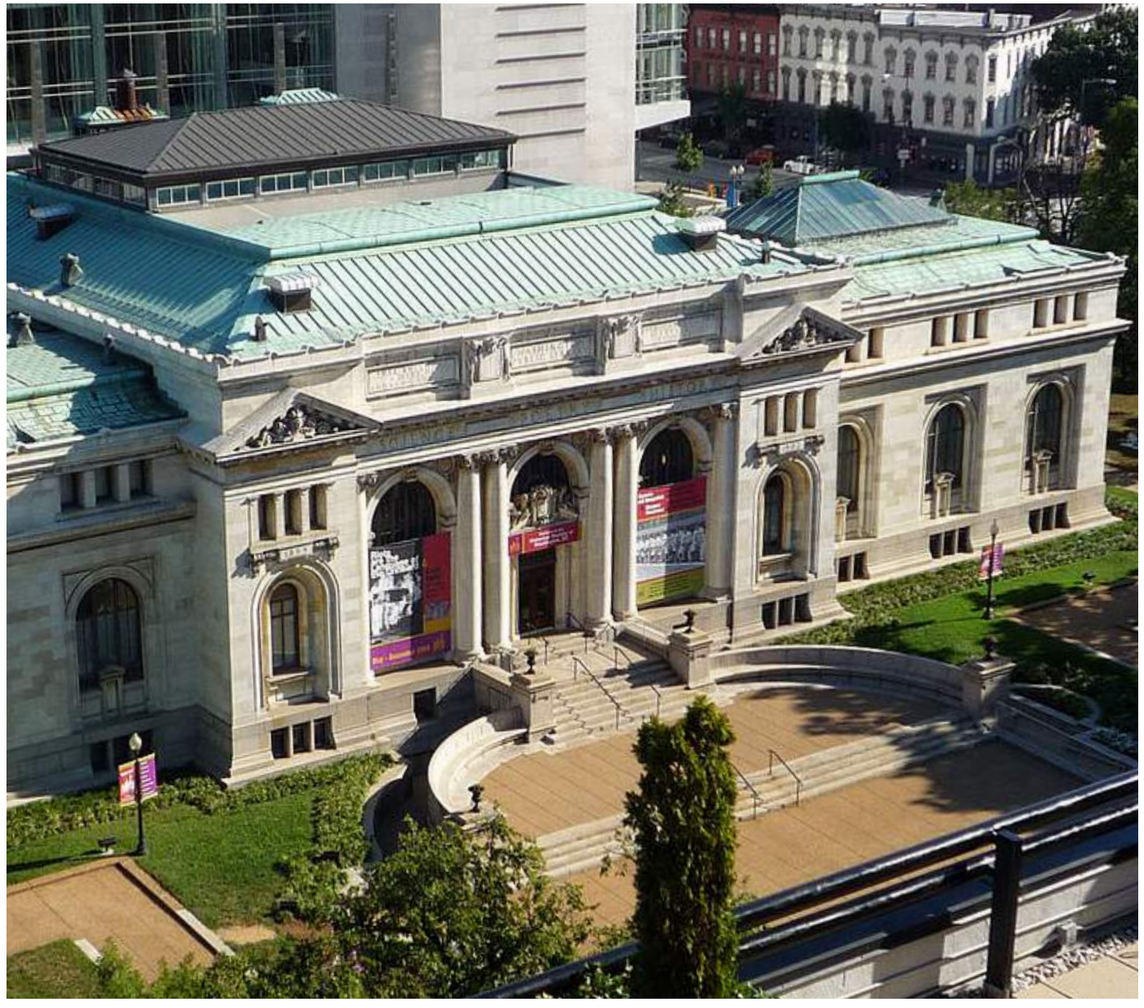


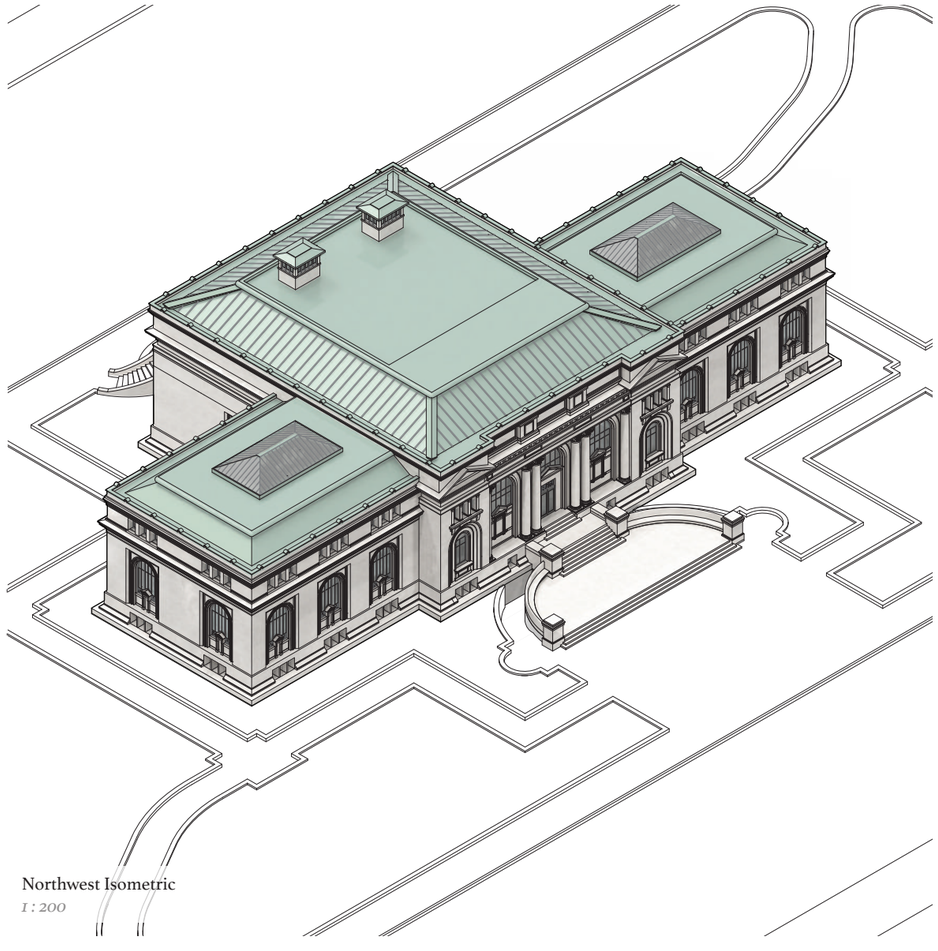
Fig. 1: Rendering of Apple DC 2 by Foster and Partners, Washington, DC, 2017.
Fig. 2: Carnegie library in Mt Vernon Square by Matthew Allchin, Washington, DC, 2013.
Fig. 3: Carnegie Library Interior by Unknown, Washington, DC, 1954.
Fig. 4: The City Museum of Washington DC by Bobak Ha'Eri, Washington, DC, 2014.

Carnegie Library | 1903 | Washington, DC | Ackerman & Ross

The Carnegie Library is a Beaux-Arts style library located in Washington D.C., Mount Vernon Square, and was also known as the Central Public Library. Donated to the public by Andrew Carnegie, Ackerman & Ross designed and oversaw construction until it was opened in 1903.[1]

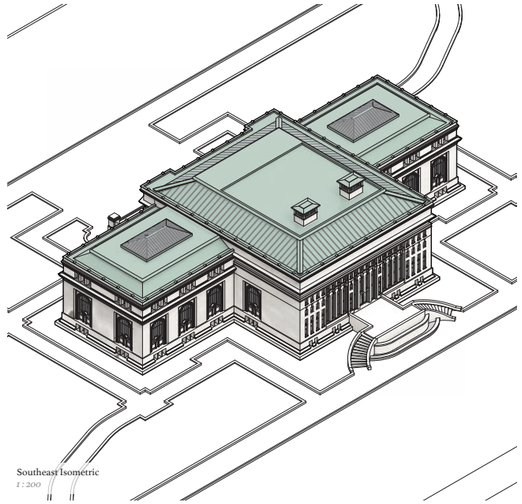
In 1969, the library was listed on the National Register of Historic Places, as it was the central public library for Washington, D.C. for almost 70 years before it became overcrowded.[2] Vacant for ten years, it was renovated as part of University of the District of Columbia. Currently it is used by the Historical Society of Washington, D.C. In 2014, Events DC twice sought to move the International Spy Museum into the library, but failed to win historic preservation approval.

In September 2016, Apple proposed renovating the library into D.C.'s second Apple Store, with grand renovations that would significantly and inreversibly alter the library.[3] In late 2016, Events DC announced an agreement with Apple to convert the space into a new retail store designed by Foster and Partners.

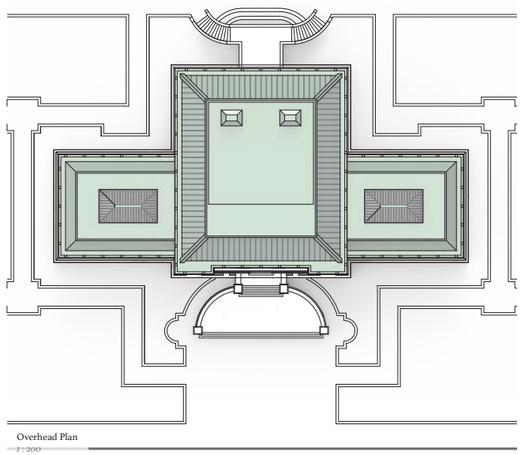


Northwest Isometric
1 : 200

1. Highsmith, Carol M., *Carnegie Library at Mount Vernon Square*. Library of Congress Prints. 2010.
2. National Park Service. "National Register Information System". *National Register of Historic Places*. National Park Service.
3. Karen Goff. "Exclusive: Apple agrees to open flagship store at Carnegie Library". *Washington Business Journal*.



Southeast Isometric
1 : 200



Overhead Plan
1 : 200

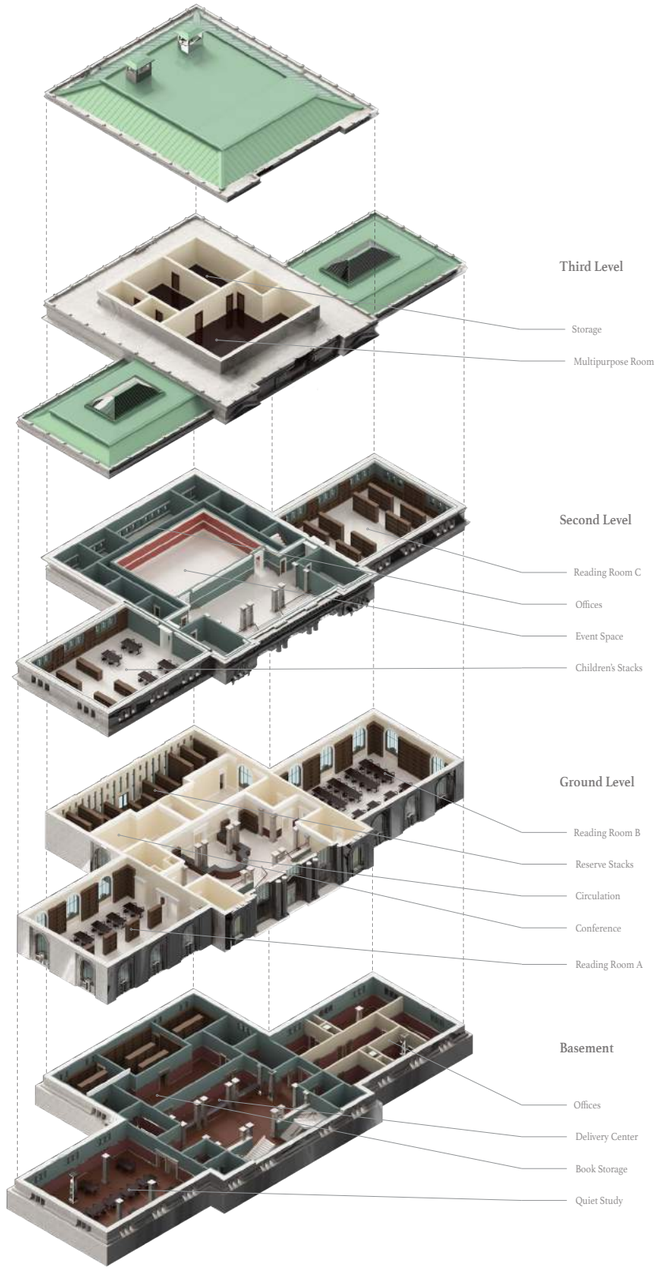
North Elevation
1 : 200

South Elevation
1 : 200

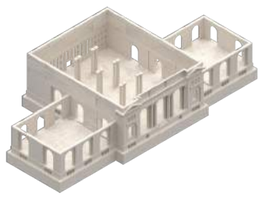
Site Documentation

These drawings explore the original conditions of the Carnegie Library. The rightside diagram depicts the intended use of the library spaces as determined by the concerted efforts of the architects and the City of Washington DC. While most rooms directly relate to programs needed to fulfill a library, Carnegie Library also houses a multipurpose room and event space, much like the interventions that Apple has proposed in recent years.

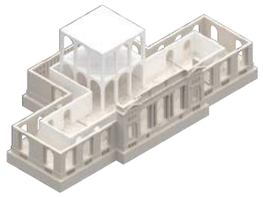
Carnegie Library



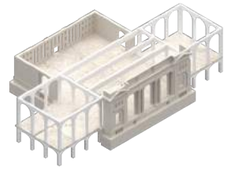
Proposed Interventions



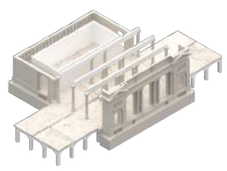
Spatial Hierarchy and Symmetry



Spatial Hierarchy and Formal Repetition



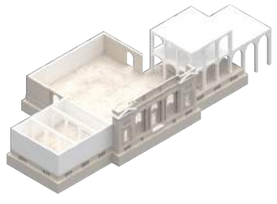
Arched Thresholds and Spatial Relations



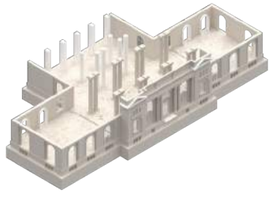
Classical Order and Showcased Spaces

Spatial Hierarchy and Representational Form

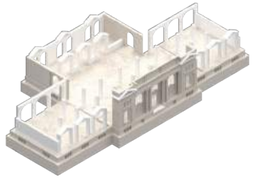
Pediment and Formal Repetition



Arched Thresholds and Spatial Relations



Classical Order and Delineation of Form and Space



Threshold / Structural Relations and Pediment

Interior / Exterior Legibility and Classical Order

III. DESIGN STRATEGIES

Precedent studies into recent, and largely underexplored, mediums of synthesizing new and old form provides groundwork in examining the causes and effects of such impositions, effectively create a catalog of interventions useful in refining and implementing meaningful design. The catalog is based on the conceptual and formal approach taken by the designer. In each precedent explored, program is either secondary or entirely obsolete following form. While program is will play a role in this project, form is the driving character.

Using the manifesto as the primary guiding design reference, developed through the continued organizing and characterizing of precedents, I will implement strategies learned into a design of my own. For example, if concerned with a project predominantly significant to the architectural discourse for its materiality and structural integrity, I will pursue an intervention that is able to capture and enrich both those qualities. From there, I will work to iterate upon the specific form while detailing progress in the manifesto, and track which individual design choices regarding the form of the chosen intervention works best.

As a method of measuring success throughout the design process, I will look toward the Intervention Analysis flowchart and reference prevalent trends.

Design choices will be grounded based on their ability to analyze, understand, and potentially manipulate:

1. historical building typologies
2. historical building styles
3. formal justifications and conceptual approach of the architect
4. how the building operates/functions according to appropriate building systems
5. construction techniques/methods

Design choices will focus on a clear purpose and result from intervention, including:

1. Successful understandings of a building's most fundamental qualities and purpose of existence
2. Success in either enhancing or enriching building qualities, or reshaping them with purpose

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Article introducing the extensive post-disaster recovery work of Al-Nammari and Lindell, explaining their work in examining historic buildings of San Francisco in the wake of the 1989 Loma Prieta earthquake and observations on social ties to reconstruction. Disaster recovery of historic buildings has rarely been investigated even though the available literature indicates that they face special challenges. This article examines buildings' recovery time and cost to determine whether their functions and their status affect these outcomes. The study uses data from the city of San Francisco after the 1989 Loma Prieta earthquake to examine the recovery of historic buildings owned by public agencies and non-governmental organisations. The results show that recovery cost is affected by damage level, construction type and historic status, whereas recovery time is affected by the same variables and also by building function. The study points to the importance of pre-incident recovery planning, especially for building functions that have shown delayed recovery. Also, the study calls attention to the importance of further investigations into the challenges facing historic building recovery.

2. Byard, Paul Spencer. Architecture of additions: design and regulation. W. W. Norton & Company, 2015.

In this book, Paul Spencer Byard, an architect and lawyer, looks at more than sixty combinations, built and unbuilt, for criteria to help protect the public interest in great buildings. Drawing on examples from Grand Central Terminal to St. Peter's Church in Rome, from the Louvre Pyramid to the Salk Institute, this book helps architects work with significant old buildings and help interested private and public persons arrive at judgments about architectural successes and failures that are rational, satisfying, and enforceable. The issues discussed here affect everyone who has a stake in livable cities.

3. Canizaro, Vincent B. ***Architectural Regionalism: Collected Writings on Place, Identity, Modernity, and Tradition*****. New York: Princeton Architectural Press, 2007.**

Book concerned with regionalist reactions to architectural movements, specifically modernism, and how different communities engage with the same principles of architecture in a variety of ways. There is no true universal architecture. Among the significant concepts discussed in these collective writings is the idea of intertwined globalization and regionalism. In a globalizing world, any investigation of architecture inevitably leads to considerations of regionalism. But despite its omnipresence in contemporary practice and theory, architectural regionalism remains a fluid concept, its historical development and current influence largely undocumented.

4. Vinegar, Aaron. "Viollet-le-Duc and Restoration in the Future Anterior." ***Future Anterior: Journal of Historic Preservation, History, Theory, and Criticism*** **3, no. 2 (2016): 54-65.**

Excerpt defining the importance of the future anterior and its role in the work of Viollet-le-Duc. Vinegar argues that restoration is subjective and all buildings are inherently susceptible to change. Viollet-le-Duc's legacy consisted of his understanding of temporality, community and politics. Viollet-le-Duc's subjectivity is included in the scene of representation in his primal scene and scene of instruction. His thought and practice include the separation of his over-imaginative work from his adherence to archaeological objectivity standards.

5. Morton, Patricia A. "The Afterlife of Buildings: Architecture and Walter Benjamin's Theroy of History," in ***Rethinking Architectural Histography*****, edited by Dana Arnold. Abingdon: Routledge, 2006.**

Excerpt explaining Benjamin's theory of "mythology" which asserts that all aspects of history have progressed, most of which goes unnoticed; progression in history can be discovered in records of art, such as architecture.